Abstract

An adaptive data communication approach permits communication bus monitoring by using a reconfigurable bus monitor built into the CPU bus structure and adapted to report back to the CPU in response to detecting certain CPU-programmed events. In one particular example embodiment, a circuit arrangement having a CPU circuit communicates with another device over a communication channel while a reconfigurable circuit monitors the communication channel. The CPU circuit configures the reconfigurable circuit for monitoring any of various types of event expected to occur on the communication channel. The reconfigurable circuit collects signals passed on the communication channel and reports back to the CPU circuit when data indicative of the first event type occurs on the communication channel. In response to the data indicative of the monitored event, the CPU circuit reconfigures the reconfigurable circuit to monitor for another event type occurring on the communication channel and thereby permits for an adaptive evaluation of the communication channel. Another aspect of the invention is directed to the CPU redirecting data communication in response to this adaptive evaluation.